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## Jamestown Beach Campground

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### 2.1 Existing Site Conditions

The total area of the Jamestown Beach Campground (JBC) property is approximately 90 acres and is currently developed as a waterfront campground with a historic residence (Vermillion House), other camp and maintenance buildings, main camp office/store building, swimming pool, mini-golf course and access to the beach with gravel parking. The park area includes forested areas some of which are wetlands, Resource Protection Area (RPA) buffers and open grass areas (see Figures 1-2 and 1-5).

#### 2.1.1 Existing Zoning

The JBC property is currently zoned as a General Business (B-1) which is described in County Code Sec. 24-389. JCC has stated that the property is to be rezoned to Public Land District (PL). The Public Land statement of intent and permitted uses are provided in Chapter 4 of this report.

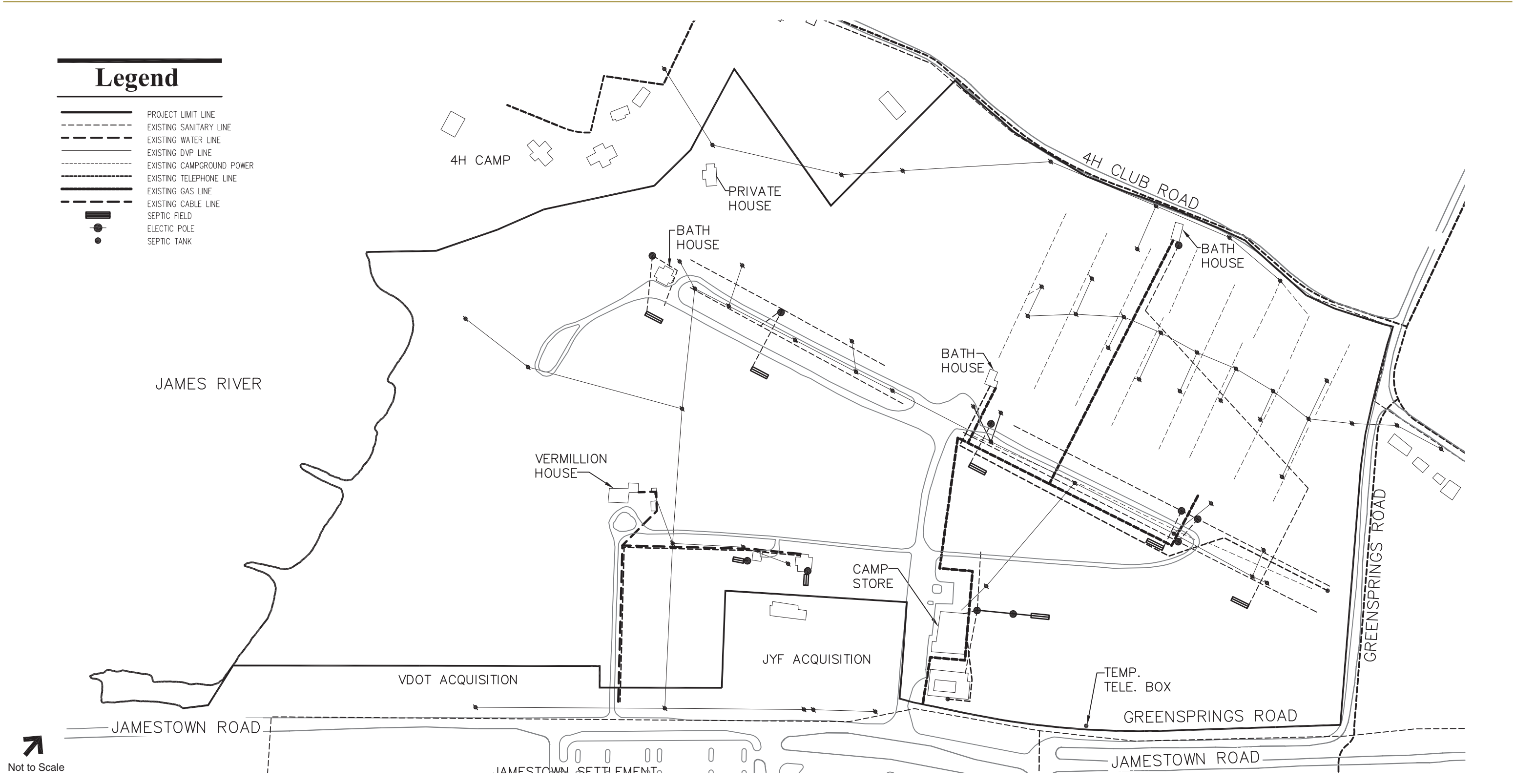
#### 2.1.2 Existing Utilities

Information related to existing site utilities was provided by JCC and was reviewed by VHB and supplemented with limited walk-through visual inspections conducted onsite. There was no mapping or surveying of surface or underground utilities performed during the master planning process. Utilities depicted on diagrams and plan within this report are approximate and based on information provided by JCC and other sources. The findings of the existing utility research and observations at the time of the study are summarized below.

##### ■ Water

The site is within the JCSA Public Service Area (PSA) and water service to the property is readily available. Water service historically has been provided by water wells located on the site which would be capped and taken out of service.

The existing network of water piping is old and in poor condition and none of it is suitable for reuse. The existing system would be removed or abandoned in place as appropriate for the final site design of the park.



### Legend

- PROJECT LIMIT LINE
- EXISTING SANITARY LINE
- EXISTING WATER LINE
- EXISTING DVP LINE
- EXISTING CAMPGROUND POWER
- EXISTING TELEPHONE LINE
- EXISTING GAS LINE
- EXISTING CABLE LINE
- SEPTIC FIELD
- ELECTIC POLE
- SEPTIC TANK

Not to Scale



NOTE: THE LOCATION OF SEPTICS FIELD ARE APPROXIMATE AND SCHEMATIC IN NATURE. THE ACTUAL SIZE AND EXTENT OF THE FIELDS ARE UNKNOWN.

## SHAPING OUR SHORES

### Master Plan

for Jamestown Beach Campground, Jamestown Yacht Basin & Chickahominy Riverfront Park

Figure 2-1  
Existing Utilities  
Jamestown Beach Campground



■ **Sanitary Sewer**

Public sanitary sewer service is available to the property as it is within the PSA. The existing sanitary system consists of several septic tank and leach field systems. Surface observations at some of the tanks and septic fields indicate that the systems appear to be in generally functional condition. There is no evidence of settlement or leaking around the tanks and the fields appear to be functioning well with no evidence of surface saturation or settlement. The leaching fields appear to be about 90'± by 40'± and are located in open grass areas. Since public sanitary service is now available to the site, the existing septic systems would be taken out of service and removed or abandoned in place. See Figure 2-1 for existing sanitary sewer system information.

■ **Dominion Virginia Power**

The site is served by Dominion Virginia Power (DVP) by overhead electric service lines and pole mounted transformers. The main overhead power line enters the site from two locations. One is from 4-H Club Road and the other from Greensprings Road. The overhead service appears to be in generally good condition however the proposed improvements will require rerouting of the electrical service and relocating it underground. Therefore essentially none of the DVP electrical service from the point it enters the property will be reused. Relocation and upgrades will be necessary to meet the needs of the future improvements. See Figure 2-1 for existing electrical system information.



*Existing Electric Hookups at Campsite*

The electrical system on the owner's (JCC) side of the meter consists of approximately seven electrical panel boxes that feed the electrical circuits for the property. Some of the existing camp sites are equipped with outlet boxes. In general, the electrical system on the property is in very poor condition and not suitable for reuse for future improvements.

■ **Natural Gas**

There is currently no existing Virginia Natural Gas (VNG) service to the site. There are propane tanks located at various locations around the site including the store/office building and at the bathhouses.

■ **Telephone**

There is telephone service to the park provided by Verizon. Service is provided to the camp store/office building, the Vermillion House and other previously occupied buildings. The existing telephone service infrastructure would be completely removed and replaced for future improvements.

■ **Fiber Optic**

At this time, there are no known fiber optic lines serving the site.

### 2.1.3 Traffic and Existing Access

The entrance to the site is on Jamestown Road (Route 31). The sight distance at the entrance is in excess of 1000 feet each way. At the intersection of Jamestown Road and Rt. 359, the posted speed limit on Jamestown Road is 35 MPH eastbound and 25 MPH westbound. According to VDOT data, 2007 average daily traffic (ADT) on Jamestown Road was 7,600 Vehicles Per Day (VPD) on weekdays. Weekend traffic is somewhat lower due to reduced commuter use of the Jamestown-Scotland Ferry.



*Existing Main Entrance*

On Greensprings Road (Route 614) from 4-H Club Road to Jamestown Road, the ADT in 2007 was 1,344 VPD. The posted speed limit for Greensprings Road is 45 MPH.

### 2.1.4 Existing Roads

The existing entrance to the property from Jamestown Road is located directly across Jamestown Road from the Jamestown Settlement bus parking lot. The entrance is paved from Jamestown Road to the main campground office building and on to the internal loop roads through the site. The asphalt is in poor condition and in need of replacement at the time site improvements are made to the property. The roads through the camping areas that branch off of the main loop road are narrow single lane gravel roads. Where feasible, the footprint of the internal gravel roads may in some cases serve for proposed roads or park pathways. Some of the existing camp roads are located within RPA buffers and the CELCP and VLCF grant areas.

### 2.1.5 Existing Parking

Vehicle parking for the park can be broken down into six general areas as follows:

- Parking lot at the camp store building/swimming pool- This parking lot is paved and is in poor condition. It has approximately 24 to 30 spaces including two ADA accessible spaces.
- Beach Parking (South)- The existing beach visitor parking is located in the southwest corner of the site adjacent to the VDOT security facility at the Jamestown ferry dock. The parking area is a gravel/dirt area with unorganized parking for approximately 20 vehicles. With the recent acquisition by VDOT of property adjacent to Jamestown Road for additional right-of-way (ROW), the access to the area is to be removed and future beach access made from internal road connections.
- Beach parking (North)- The parking area is located at the north end of the beach adjacent to 4-H Club property. There is vehicle access to the beach with unorganized parking for approximately 20 vehicles.
- Parking at campsites- each camp site has unpaved parking off of the park roads which equates to approximately 600 spaces.





- Event Parking/Overflow Parking- for events and festivals, parking is provided on the grass area north of the entrance. This area is suitable for continued parking for occasional events. It currently accommodates up to approximately 500 vehicles.
- Miscellaneous Parking- there are some parking spaces at each of the bathhouses, staff cabins, maintenance shed and at the Vermillion House. The combined number of spaces is approximately 30.

#### **2.1.6 Existing Buildings**

The consulting team conducted a building inventory and a walk-around visual inspection of the buildings for the purpose of determining potential reuse of the buildings for future park operations. The buildings at JBC fall into two categories: the Vermillion house and its dependencies and the more recent buildings supporting campground operations. The results of the inspection indicate that the Vermillion House and its dependencies (because of historic significance) are suitable for reuse as a focal point of interest in the park. The remaining buildings and structures have no reuse potential.

Refer to Appendix D for a brief description of the types and condition of the buildings and graphic map identifying the letter designation (“A” thru “O”) for the building described.



*View of Main Building from Jamestown Road*

#### **2.1.7 Existing Landscaping and Amenities**

The existing landscape of the JBC presents many special features as well as a diverse existing landscape. The most prominent feature in the landscape is the gardens and specimen plantings of the Vermillion House including several massive tulip poplar trees. Flanked by large rows of mature pines, the formal gardens of the Vermillion House present a unique opportunity for supplementing and interpreting this historic feature.

Another feature of the existing landscape is what is believed to be the ‘Greate Road,’ which is characterized by a row of mature hardwoods and a low path. This feature presents an opportunity for historic interpretation.

The forested areas of the site are characterized by upland and lowland hardwoods and some second succession growth in other areas. Generally the understory on the forested areas is fairly sparse due to previous camping activity on the site. Amenities on the site are fairly limited and underutilized. The open areas are used for large events from time to time.

## 2.1.8 Waters of the U.S and Associated Chesapeake Bay Protection Areas

### 2.1.8.1 Results of Fieldwork

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Wetland delineations and Perennial Stream Determinations (PSD) were completed by VHB wetland scientists at the Jamestown Beach Campground in early 2008. Delineations were carried out in accordance with the three parameter approach outlined in the U.S. Army Corps of Engineers Wetland Delineation Manual (1987). PSDs were conducted using the North Carolina Division of Water Quality Identification Methods for Origin of Intermittent and Perennial Streams, Version 3.1. The subsequent designation of RPA features was carried out in strict adherence to both the above-cited DCR guidance and County ordinance.

The U.S. Army Corps of Engineers' Jurisdictional Determination for the Jamestown Beach Campground is included in Appendix E. JCC approval of the PSD and the resulting Resource Protection Areas are also included in Appendix E.

#### Tidal Wetlands

Tidal, freshwater wetlands at Jamestown Beach Campground occur as two cover types, both located at the confluence of the tributary stream with the James River in the northwest corner of the project area adjoining the 4-H Club property (See related Figure in Appendix E). A seasonally inundated and tidally influenced bald cypress forest (PFO2R) is present at this location, having an understory of sedges (*Carex* sp.), wax myrtle (*Myrica cerifera*), and eastern false-willow (*Baccharis halimifolia*). A tidal, freshwater marsh (PEM1R) lies between this forested wetland and a dirt access road to the east, dominated by big cordgrass (*Spartina cynosuroides*), three-square bulrush (*Scirpus pungens*) and swamp rosemallow (*Hibiscus moscheutos*).

These wetlands contain species that define "vegetated wetlands" per both Chapter 22 of the County Code and §28.2-1300 of the Code of Virginia. Their landward extent is therefore defined by an elevation that is 1.5 times the mean tide range. However, the tidal wetlands at the Jamestown Beach Campground are largely defined by the contour along the toe of steep side slopes. As a result, the elevation coincident with 1.5 times the mean tide range is approximated by the actual surveyed wetland lines in these areas.

The shoreline beach of the James River between Mean Low Water (MLW) and seasonal high tide line constitutes Waters of the United States. This system is classified as tidal, freshwater riverine, unconsolidated shoreline dominated by sand (R1US2). The sandy shoreline of the river extends along the entire western property boundary with the exception of the shoreline nearest Jamestown Road (Route 31) where old fill material comprised of a mixture of spoil and broken concrete was placed into the river channel forming a small peninsula. This portion of the shoreline is classified as tidal, freshwater riverine, unconsolidated shoreline dominated by artificial substrate (R1USr).

Because this shoreline is not vegetated, the limit of State jurisdiction is Mean High Water (MHW). This elevation was approximated using surveyed spot elevations, field observations of wrack



lines, and high-resolution aerial photography. Because it is not based on local tide gauging or time-specific (*i.e.*, high-tide) surveying, this elevation was conservatively estimated.

### Non-Tidal Wetlands

Farther upstream from the tidal wetlands located in the northwest corner of the property, the wetland transitions to a non-tidal forested floodplain system (PFO1A) dominated by sweet-gum (*Liquidambar styraciflua*), red maple (*Acer rubrum*), and American sycamore (*Platanus occidentalis*) trees. Shrub, vine and herbaceous species in the non-tidal system include possum-haw viburnum (*Viburnum nudum*), coastal pepperbush (*Clethra alnifolia*), common greenbrier (*Smilax rotundifolia*) and rice cutgrass (*Leersia oryzoides*). Further upslope, the floodplain shelf narrows alongside the stream channel at an area dominated by a dense stand of bamboo until such point that the channel transitions to a man-made ditch that bisects a portion of the campground (See related Figure in Appendix E). The ditch is punctuated by culverts in many locations where campground trails and roads occur. Isolated, non-tidal emergent wetlands (PEM1C) lie adjacent to this ditch beyond the point where it ceases to be jurisdictional; at the far east-central limit of the project area near Greensprings Road. These relatively small, depressional features were likely created by historic ditch excavation and side casting, which disturbed the natural drainage pattern and resulted in pockets of seasonal inundation.

A densely vegetated, palustrine scrub/shrub wetland (PSS1) occurs in the southwest portion of the property, sustained by both groundwater and stormwater runoff via a culvert under Jamestown Road. This culvert is likely connected to the road and perhaps parking lot drains on the south side of the road. This depressional wetland



View from Wetland to Jamestown Road

remains inundated during much of the year and contains a dominance of black willow (*Salix nigra*) with sweet-gum saplings. Vine and herbaceous vegetation along the edge includes common greenbrier, wild grape (*Vitis rotundifolia*), and soft rush (*Juncus effusus*). During storm events, excess water from this wetland flows towards the west into a ditch. This ditch terminates roughly 200 feet from the James River shoreline, whereupon the conveyance continues underground in a concrete pipe that discharges to the beachhead.

### Resource Protection Areas

Wetland features that are connected to and contiguous with the perennial James River were accorded RPA status and a 100-foot buffer as depicted in the related Figure in Appendix E. This includes the tidal and non-tidal wetlands in the northeast corner of the site. The tidal shoreline along the entire western perimeter of Jamestown Beach Campground is also an RPA feature. As previously noted, the elevation of Mean High Water (MHW) was conservatively estimated, thus insuring an inclusive RPA buffer.

The two onsite ditches were evaluated to determine whether or not they are perennial features. A single Stream Assessment Reach (SAR) was established in each channel at their lowermost point. SAR A is located in the southwest ditch, just upstream of the culvert. SAR B was located in the northern ditch feature at its confluence with the non-tidal bottomland wetland, as this point represents the limits of mandatory RPA wetlands based on State and County guidance.



*View of Existing Beach Looking South*

Both ditches were found to be intermittent features. Because the northern ditch at SAR B has no adjacent wetlands (*i.e.*, jurisdiction is limited to the bed and banks), the landward limit of the RPA is restricted to the downstream wetland line. As the southern ditch at SAR A is not contiguous with the James River nor does it have any adjacent wetlands, it was also determined to be a non-RPA feature.

### **2.1.9 Threatened and Endangered Species**

A review of the Virginia Department of Game and Inland Fisheries on-line database (Virginia Fish and Wildlife Information Service) was performed to determine if any listed species have been cited as occurring in the vicinity of the JBC. The following information is a summary of the results.

The online database reveals the presence of two listed species within a 2-mile radius from the Jamestown Beach Campground and Yacht Basin properties– the bald eagle and sensitive joint vetch. The bald eagle (*Haliaeetus leucocephalus*) is currently listed as a Species of Concern by the U.S. Fish and Wildlife Service and as threatened by the Virginia Department of Game and Inland Fisheries. Two bald eagle nests occur in close proximity to the property. One nest is present on Jamestown Island approximately 1 mile south of the Jamestown Beach Campground property. Another nest site was documented approximately 2 miles north of the campground site near Route 5. Generally, regulatory agencies restrict certain land activities within a circular buffer having a ¼ mile radius surrounding active nest sites. These two nests appear to be too far from the two Jamestown properties to cause disturbances to nesting eagles.

The DGIF database also records in 1992 the presence of a colony of sensitive joint vetch (*Aeschynomene virginica*) along the shoreline of the campground site adjacent to the James River. This species is listed as threatened by the U.S. Fish and Wildlife Service and the Virginia Department of Conservation and Recreation. The DGIF record appears to be an anomaly, as sensitive joint vetch is a plant that occurs within freshwater tidal marsh habitats. The DGIF map points to a location along the campground beach shoreline that does not contain suitable habitat for the species. The shoreline comprises upland sandy soil conditions above the mean high tide elevation. No plants were observed during a field inspection. It is believed the on-line mapping of the sensitive joint vetch pointing to the Jamestown Beach Campground property may be an



error with the intention of mapping the presence of a nearby colony at Neck-of-Land just north of Jamestown Island.

#### **2.1.10 Cultural Resources**

Due to the close proximity of JBC and JYB and the historic connection of the two sites, cultural resources are discussed together in the following summary by *Archaeological & Cultural Solutions, Inc.* (ACS).

From October to December 2007, ACS conducted a Phase I (identification) survey of the Jamestown Beach Campground and Jamestown Yacht Basin properties. Since the entire project area lies in the Governor's Land Archaeological District, which is on the Virginia Landmarks Register and the National Register of Historic Places, archival work consisted of a review of the state data base, as well as historic cartography and archaeological literature, to assess the potential for the presence of archaeological sites of the prehistoric and historic periods in this highly sensitive location. The detailed results of this project can be found in *Phase I Cultural Resources Survey of the James City County Campground and Yacht Basin Marina, James City County, Virginia*, prepared in June 2008.

Phase I fieldwork resulted in the discovery of nine archaeological sites and 36 isolated finds locations. Phase II (evaluation) investigations or avoidance is recommended for six of these sites to refine their boundaries and to determine their subsurface integrity. Three sites contained re-deposited materials related to previous construction activities at the Jamestown Beach Campground and Jamestown Yacht Basin, thus, no further work is recommended at these locations. All of the isolated finds locations contained less than three artifacts and were the result of either late nineteenth century or twentieth century refuse dumping. No further work is recommended at these isolated finds locations.

In general, the Phase I, and ongoing Phase II fieldwork on two sites show that the project area was occupied in prehistoric times from as early as the Middle Archaic (6,000 BC-4,000 BC) to the Contact period (1607 and after), based upon the recovery of stone tools and ceramics. In the historic period, the earliest occupation lies on the river side of the extant Vermillion house at the JBC and it dates to the first quarter of the seventeenth century. A nearby surviving trace of the 1607 "Greate Road," which led from Jamestown Island onto the mainland, was clearly tied to this site. Eighteenth century use of this property appears to be for agricultural purposes and the main occupation in this period lies on the Yacht Basin part of the project area, where the Ambler plantation was located.

The Ambler occupation played an important role in the 1781 Yorktown Campaign as the site of three successive military camps for the British, American, and French armies. After this site was abandoned in the early nineteenth century, a residence was again established, on the Jamestown Campground parcel in the late 1820s or early 1830s. This occupation is evident in the oldest part of the extant Vermillion (last owner) house and its surrounding archaeological components. A final but important chapter in the history of the project area is represented by the improvements made to the Vermillion House which include additions and outbuildings, as well as a formal



garden. These significant changes to the landscape mirror the early restoration efforts at nearby Colonial Williamsburg, in the 1920s and 1930s.

(The above excerpt was provided courtesy of Alain Outlaw, *Archaeological & Cultural Solutions, Inc. (ACS)*)

#### **2.1.11 Soils**

Soil types on the site are depicted in the soils map (see Appendix F, Figure F-1), Data source: VBPM VGIN 2006/07 Orthophotography and NRCS Digital Soils Database). Appendix F also contains a list describing the soil types noted on the map. The soils are generally silty loam and clay that is moderate to well drained. No geotechnical investigation or testing was performed on site as part of this evaluation. From an historic perspective, the soils are likely to be suitable for proposed building construction.

#### **2.1.12 Shoreline**

The JBC property is bordered by the James River to the west with access points at both the north and south ends. The beach extends approximately 1,300 feet from the Jamestown Ferry pier to the 4-H Club property line and consists of stable beach and uplands in the vicinity of the ferry pier and existing parking area to bluffs with approximate elevations 14' to 15' above the water's edge in the northern portion of the beach area.



*Slope Erosion near Beach at northwest corner of the site*

Along the bank there is approximately 600 feet of dumped construction debris "revetment" consisting of broken concrete and brick. This unengineered "revetment" is grown over with grass, shrub and tree vegetation and provides minimal protection of the bank from storm effects. The width of the sand beach varies from an average of 1' to 15' at high tide to 10' to 20' at low tide.



There are three stone groin structures that extend approximately 100' to 150' into the river. These structures provide some benefit in trapping down drift sand on the north side of the structures. In addition, the beach area is isolated from the ferry pier by a peninsula of fill material and concrete construction debris. There appears to be the remnants of an old boat ramp at the end of the peninsula.

Refer to the section above regarding wetland and RPA buffer areas along the James River.

#### **2.1.13 Stormwater Drainage**

The existing site drains generally east to west to the James River via sheet flow, grassed swales, and roadside ditches. Slopes generally range from 1 to 3 percent throughout most of the site with an increase to steep slopes along the north bank of the James River. The stormwater drainage patterns of the project area were reviewed on JCC provided GIS topographic mapping and field observation. Topographic survey in the field was not conducted for the study with the exception of along the James River shoreline.

Along the top of bank of the James River there are some areas of steep slopes (vertical drop of approx. 12'-15') where erosion due to stormwater run-off and fallen trees is significant and in need of treatment by bank grading and replanting of the RPA buffer area. These areas of erosion are all fairly small localized drainage areas that would be addressed during site design to dissipate concentrated run-off and minimize the potential for future erosion of the bank. The drainage design would be coordinated with slope stabilization and buffer planting to ensure a stable slope down to the river. Refer to the related section below on shoreline improvements for additional information.

#### **2.1.14 Floodplain**

Portions of the JBC parcel are within the 100-year floodplain as designated and shown on FEMA Flood Insurance Rate Map Number 51095C0185C, effective date September 28, 2007. The base flood elevation on the parcel is 7.5 feet (Zone AE). The areas are located along the shoreline of the James River and include the wetland area adjacent to the 4-H Club property. There is also a small area adjacent to the new VDOT acquisition that falls within the 500-year floodplain (Zone X). (See Figure 1-5)

#### **2.1.15 Hazardous Materials**

There were no reports of hazardous materials known to be located on the property and none were observed during field inspections. A Phase I Environmental Site Assessment was performed by PBS&J for James City County. Refer to the PBS&J report titled, "*Phase I Environmental Site Assessment Jamestown Beach Campsites and Yacht Basin Properties James City County, Virginia*" dated November 30, 2005 for additional information.

### 2.1.16 Property Line Setback and Community Character Corridor

Per James City County Zoning Ordinance, Section 24-535.4, the dimensional standard for minimum yard requirement (building setback) is a 35-foot setback from the property line. The setback line identifies the outer boundary limit for potential development.

Jamestown Road and Greensprings Road are Community Character Corridors (CCC) which are roads that are considered entrance corridors that promote the rural, natural, or historic character of JCC. There is a 50' CCC buffer along the roads that are respected in the proposed master plan by maintaining the existing natural buffer and enhancing it to the extent possible.

### 2.1.17 Summary of Site Constraints

There are no observed issues related to existing infrastructure that create significant constraints on the site in terms of future development and improvements.

The objective of the preliminary site evaluation was to determine the site opportunities and constraints and to evaluate the project area for areas most feasible for park improvements and development of park amenities. The table below summarizes the areas of various types of designated land and buffer areas.

Description of Areas	Approximate Area (acres)
Overall Site	90.3 ac
USACOE Confirmed Wetlands	2.9 ac
Resource Protection Area (100' buffer)	9.0 ac
VLCF and CELCP Grant Area	44.2 ac
Steep slopes (> 30%)	0.4 ac
Property Line Set Back	9.5 ac
<b>Developable Areas<sup>1</sup> (per Master Plan):</b>	<b>40.7 ac</b>

<sup>1</sup> Developable area consists of land within the property line and outside of the above listed constraints

Figures 1-2 and 1-5 depict the environmental and site constraints of the property. Of the overall 90.3 acres, approximately 2.9 acres are USACOE confirmed wetlands. As can be seen by the table above, approximately 40.7 acres of the total area are developable.



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## **2.2 Conceptual Site Improvements**

The following section discusses the details of the concept plan depicted in Figure 2-2. The plan shows the proposed park elements, roads, parking, and associated amenities relative to the environmental, physical and zoning constraints of the site. Each topic below summarizes the master plan program element in relationship to the site.

Once the overall site constraints were understood and documented in the constraints map, layout of the following park program elements began. Throughout the master planning process, various layouts evolved which were based on the continuing evaluation of the site and by public input. Several variations of the JBC concept plan layouts were considered, evaluated and revised by the project team prior to the development of the proposed plan presented here.

Several key decisions were made during the planning process which were important to the final proposed concept plan. They are summarized below in the discussions relating to the development of the specific program elements.

The sections below that are designated “A” through “X” refer directly to program elements depicted on the master plan, Figure 2-2.

### **2.2.1 A-Vermillion House Restored**

The Vermillion house and outbuildings are to remain largely in their current state, but the building systems would be updated, and interior modifications made in order to make the house more functional for event and/or office use. Further research to clarify the history of the construction of the house is needed to guide future improvements. The interior of the house has had significant changes over time. Modern additions such as the garage may be either removed or modified to facilitate the planned building use. No alterations will be made that would jeopardize the house’s eligibility for listing on the National Register of Historic Places. The exterior of the out buildings will be restored, and the interior and building systems of the larger one will likely be reworked as required to support the proposed building function, which may be primarily office space. Landscaping around the buildings is overgrown, and would be redone in a way that is in keeping with the historic setting. The Vermillion House, associated out buildings and yard are proposed as a focal point of the park and a center of activity. In addition, it can house exhibits that interpret history and nearby archaeology sites to the public.



*The Vermillion House*



KEY	
A - Vermillion House Restored	M - Secondary Beach Access / Picnic Area
B - Event Tents	- Small Non - Motorized Boats
C - Formal Gardens	- Day Sailors
D - "Greate Road" Interpretive Area	- Kayaks
E - Events/Parking and Overflow	N - Preserved Viewshed
F - Maintenance Center	O - Fishing Pier
G - Beach Access and Parking	P - Ropes Course
H - Beach Pavilions	Q - Rental Cabins
- Concessions	R - Roundabout & Left Turn Lane
- Vending	S - Environmental Education Area
I - Playground Area	T - Trailhead with Restrooms
J - Shoreline Stabilization and Beach Renourishment	U - Mainland Farm Interpretive Area
K - Great Lawn / Special Event Area	V - Large Event Exit Only
L - Performance Venue	W - Area for Group Tent Camping
	X - Bioretention Basins





The lawn between the house and the river is itself a major park amenity. The lawn is an important viewshed from the house and the events that would take place there. The open lawn space is similar to the “great lawns” found at 18<sup>th</sup> century plantations along the James River. The unique topography of the site with the bluff at the edge of the beach allows the waterfront to accommodate beach activities (swimming, boating, sunbathing, etc.) without interrupting the viewscape.



*View of James River from Vermillion House*

### **2.2.2 B-Event Tents**

With the Vermillion House as the centerpiece of the development of this portion of the site, space is needed to accommodate and support events such as weddings, receptions, small concerts, etc. in this location. The event tent accomplishes this function by providing covered, and potentially enclosed and conditioned space that would support the events. The tent(s) would be located adjacent to garden areas and within proximity to the house and to parking to allow these events to benefit from the other site amenities in the area. With the historic house, proposed pathways to the beach area, the views of the river, and the formal gardens, the setting is ideal as an event rental venue for weddings, family/corporate gatherings and other events. The event tent would either incorporate its own restroom and catering spaces, or be supported by spaces in the adjacent house or outbuildings.

### **2.2.3 C-Formal Gardens**

Upon additional research to better determine the nature of the original formal gardens around the house, the formal garden would be restored and enhanced with the addition of a variety of botanical species. During the master planning process, there has been much interest from the Williamsburg Botanical Garden (WBG) organization in developing botanical gardens on the property. (See Section 2.33 below for further discussion related to the WBG proposal). This area is suited for botanical gardens due to the historic formal garden in this location and the complementary nature of a botanical garden with the types of events proposed.



The formal gardens will be the focal point of the events center at the Vermillion House. Landscaping proposed in this location will be heavily maintained and embody the work of the period which it represents. Seasonal perennials and annuals will complement the existing shrubs and trees. Vehicular circulation will be restricted from this area except for utility vehicles providing services related to the function of events, etc. Proposed pedestrian circulation routes will lay on existing grade such as to not disturb the root zones of the plant materials.

#### **2.2.4 D-“Greate Road” Interpretive Area**

The surviving trace of the 1607 “Greate Road” is highlighted here as an interpretive point of interest. Refer to the Cultural Resources section above for more information and the significance of this historic site.

The original roadbed of the “Greate Road” runs through the site near the Vermillion House. It is anticipated that vegetation would be selectively removed with appropriate tree trimming to reveal the site for historic interpretation. Where the new access road to the beach crosses the “Greate Road” a bridge would be designed to pass over the historic roadbed without disturbing it and provide an opportunity to interpret the history of the site, and to showcase a site feature that is currently almost completely obscured from view.

#### **2.2.5 E-Events/Park Parking and Overflow**

The main parking lot is centrally located for easy access and wayfinding and for close proximity to the Vermillion House activities and events. The view of the parking lot from the Vermillion House is well screened due to the mature pine trees that exist on the east side of the house. The parking lot contains approximately 110 spaces constructed of pervious pavers and would be designed using LID techniques within the parking lot. The parking area to the south would be for overflow parking and be designed as a “green” parking lot, using either structured grass or permeable paving surfaces and landscaped to screen parking to the greatest extent possible.

#### **2.2.6 F-Maintenance Center**

The maintenance center is located directly off of the main entrance road and situated between the Vermillion House and the Performance Venue, directly opposite the Great Lawn. This provides easy access for JCC park staff to all the primary park amenities, including the beach. There is parking provided for approximately 20 vehicles.

This area will serve as the maintenance center for the park and will likely consist of an area for the storage and maintenance of equipment used for mowing and maintenance of buildings, paths, cabins, etc. There would likely be an area for materials storage, shop area, office and maintenance personnel support area and restrooms. This could also potentially act as a park office, with a service counter for interaction with the public.

#### **2.2.7 G-Beach Access and Parking**

The James River beach area is the paramount feature of the entire site with spectacular views and easy access from both ends of the beach. The primary access to the beach is on the south side near

Jamestown Road. The access road, cul de sac and parking are brought as close to the beach as possible without impacting the RPA buffer and the viewshed of the river from the Vermillion House. Beach users will be able to drop off supplies and gear at the cul de sac before parking. There are approximately 32 to 36 parking spaces provided at this location.

The pedestrian circulation consists of paths connecting parking areas and the internal trail network to the beach, river and fishing pier. Restrooms and vending machines are provided at the two beach pavilions.

#### **2.2.8 H-Beach Pavilions**

These pavilions at the terminus of the walking paths to the beach are shelters that include restroom facilities and vending machines in support of the beach area. In addition, one of the pavilions, most likely the northernmost pavilion, would also incorporate a limited concession stand facility for the sale of refreshments and other beach related items. These structures would be designed to be stylistically in keeping with the historical nature of the site and the beach front location. Impacts to the environmentally sensitive beach areas will be minimized by limiting within a designed footprint the high visitor use areas so that they remain stabilized and well planted and landscaped pavilion areas. This will ensure the proposed improvements have minimal impacts to the buffer and grant areas and that the overall effect of the new amenities is an improvement to the existing conditions at the locations.

#### **2.2.9 I-Playground Area**

The playground areas can range between very simple passive recreation areas with only benches and minor improvements to a full playground made up of prefabricated structures grouped separately for multiple play ages depending on limitations that may be imposed by VLCF grant requirements. As noted above, impacts to the environmentally sensitive grant areas will be minimized by limiting the playgrounds to a designed footprint so that they remain stabilized and well planted and landscaped areas. This will ensure that they have minimal impacts to the buffer and grant area and that the overall effect of the amenity is an improvement to the existing site conditions.

The play areas are located in close proximity to the restrooms and parking areas to minimize walking distance and they will provide opportunities for use throughout the year and not just during the summer beach season. This area will likely be outfitted with benches and picnic tables for families as well as adequate facilities for trash and recycling.

#### **2.2.10 J-Shoreline Stabilization and Beach Renourishment**

Improvements are needed along the beach to re-nourish it and provide a stable shoreline and predominant beach amenity for the park. This would be accomplished by the construction of offshore stone breakwater structures, beach fill and beach plantings. The shoreline improvements will have a three-fold benefit of stabilizing the bank, providing for buffer restoration and planting and the creation of a larger and more stable beach. In addition, organized and stabilized beach access will be provided directly to the water for park users in a manner consistent with the

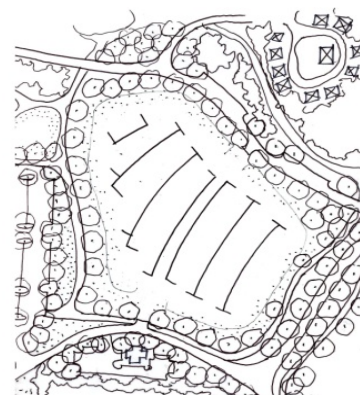
goals of the CELCP and VLCP grants. The shoreline stabilization improvements could potentially be funded in part by Living Shoreline and other related grant sources.



*Breakwater at Yorktown Riverfront*

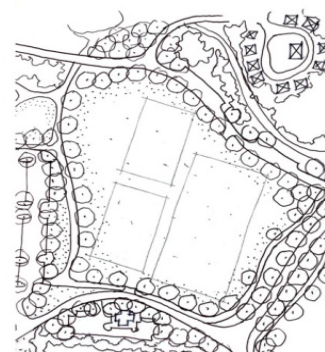
#### **2.2.11 K-Great Lawn/Special Events Area**

Two event lawns are planned for the park. One is an open area designated as ‘K’ on the conceptual plan, the other is designated as ‘L’ and described immediately below in the next section. The Great Lawn is to be planted with grass and mowed regularly within season. While it is intended to also provide overflow parking in support of large events taking place on plan designation area ‘L’, it may also function independently for use by certain groups or organizations for unofficial sports activities like soccer or softball games. As an example, the diagram below depicts how the area could be used to accommodate two small training fields and one full-size field for soccer.



*Parking*

The Great Lawn will be a central, accessible and very visible feature on the site. The function of this space is to provide opportunities for large revenue generating events and support such events with parking and provide green space for passive recreational uses. This area is to be landscaped to maintain a hardy stand of turf and graded to drain effectively to perimeter ditches along the vehicular circulation routes so that the areas could serve as unofficial athletic fields (no field striping or goals, etc.) as noted above.



*Unofficial athletic field play areas*

#### **2.2.12 L- Performance Venue**

In the center of the park, the large open grass Performance Venue is maintained and improved with facilities and utilities to support events, such as festivals, re-enactments of the Battle of

Greensprings, art and craft fairs, farmer's markets, carnivals and other events. The area will be lightly graded to ensure proper drainage away from event areas and planted with grass and mowed and maintained with the seasonal growing pattern. The grass areas closer to Jamestown and Greensprings Roads would be allowed to naturalize into a meadow as a soft transition zone bordering the mature trees screening along the Community Character Corridors of the roads. Deciduous hardwood trees will be planted along the internal circulation routes to provide shade, spatial division and screening from other uses. The intent of the design is to provide flexibility for events while providing utilities and parking provisions associated with them.



*Performance Venue*

The Performance Venue building provides a raised stage area on the backside with support spaces, restrooms, park office and storage space all under one roof. This building acts as another focal point of activity at the east side of the park and provides support for large events. There would also be utilities run along the roads to either side of the stage building that would support mobile concession vendors coming and setting up along the road in support of these events. Some parking has been provided along the road to the north of the lawn to support day to day use of this and adjacent areas, and

when large events occur, parking would be accommodated in the Great Lawn/Special Events Area. These areas would also be made available to the Jamestown-Yorktown Foundation (JYF) for temporary overflow parking. In addition, for special JCC events, it is hoped that the JYF parcel would also be available for overflow parking in support of county events.

### **2.2.13 M-Secondary Beach Access**

This area provides parking and access to the north end of the beach, and is located in the same location as the existing beach turn-around and therefore creates no new impacts within the buffer and grant areas.

### **Canoe/Kayak, Day sailors, Non-motorized Boats Launch Area**

The designated location for non-motorized vessel launching and recovery is located at the beach area. It takes advantage of the historic uses of this area for similar purposes and the naturally stable and accessible beach area.

### **Picnic Shelters**

Public picnic and daytime use area is designated for this area. It offers the scenic views of the river and natural wooded areas. The structures would be placed on concrete slabs with mulch or paved (for ADA accessibility) paths leading to them from parking areas. Associated with the picnic sites are cook grills, trash cans and bike racks.



*Picnic Shelter at New Quarter Park, York County*





#### **2.2.14 N-Preserved Viewshed**

The original driveway to the Vermillion House will no longer be used as an active point of ingress and egress to the site, but is preserved in order to maintain the most predominant viewshed of the Vermillion House from Jamestown Road. The visibility and stately setting of the house in the surrounding landscape is an important part of its charm and attraction. The original driveway will serve as a park pedestrian way.

#### **2.2.15 O-Fishing Pier**

This location has historically been a site frequented by fishermen for shore fishing. The inclusion of a fishing pier 50' to 60' long further enhances the fishing experience by providing access to deeper water. The pier would have a "T-Pier" end of approximately 30'. The pier also provides an opportunity for a scenic overlook and interpretive signage relating to the river and Jamestown history. In the plan, the pier is depicted as being approximately parallel to the VDOT ferry pier.

VDOT has indicated that they are not opposed to the fishing pier in concept but that their approval would be needed as to the final location and design of the pier. They also noted that the use agreement executed with VDOT for the purchase of the land adjacent to the ferry may restrict future access to the area. These issues would have to be worked out with VDOT prior to any fishing pier plan development.

#### **2.2.16 P-Ropes Course**

The Ropes Course, often referred to as "Challenge Courses," is planned as a park amenity that can be a shared resource in partnership with the 4-H Club. It is conveniently located in the northwest corner of the park adjacent to the 4-H Club property line. It is located within the confines of the natural wooded grant areas and its use is compatible with grant requirements. The development of a challenge course would have minimal environmental impact on the site. The Association for Challenge Course Technology (ACCT) is a professional organization dedicated to developing standards for the construction and operation of challenge courses and they should be referred to in any final layout of a course.

#### **2.2.17 Q-Rental Cabins**

Throughout the planning process, many discussions ensued regarding whether to continue having camping opportunities at JBC, or to discontinue camping completely. In the final analysis, it was determined most feasible to consolidate primitive and full-service RV camping at CRP so that JBC and CRP do not compete against each other and limit the number of JCC owned campgrounds competing against private campgrounds.

Because of the unique setting of JBC in relationship to Jamestown, Williamsburg and other local attractions, two forms of limited camping have been maintained at JBC to provide a venue for visitors desiring to see local attractions while staying at



*Cabins (Stub Stewart)*

camp-like accommodations and for group tent campers. The Rental Cabins are described here and the Group Tent Camping area is described below in program element “W.”

The pods of cabins depicted can accommodate approximately 30 to 40 or more cabins depending on the density of the final site design. They are intended to be clusters of cabins, grouped around a central activity building and lawn area that would allow the entire cluster to be rented out to a group for a retreat, reunion or other event, or the cabins to be rented out separately. The buildings would be designed to be stylistically in keeping with the historical nature of the site, while being durable and easy to maintain. They are not intended to be rustic cabins but rather comfortable accommodations with full bathrooms and some perhaps with kitchen facilities.

### **2.2.18 R-Roundabout**

The inclusion of a roundabout at the intersection of Greensprings and Jamestown Roads provides several benefits for the immediate area. The benefits can be briefly summarized as follows:

- It provides a “gateway” to the Jamestown Historic Area, including the Jamestown Settlement, the National Park Service (NPS) and the Association for the Preservation of Virginia Antiquities (APVA) facilities on Jamestown Island, JBC, JYB, the Jamestown-Scotland Ferry, Mainland Farm and the Colonial National Historic Parkway. The roundabout serves as a gateway and traffic calming device for traffic approaching the area from Williamsburg. The roundabout would be landscaped along the sides and within the circle where appropriate signage would be placed.



*Location of Proposed Traffic Roundabout*

- It provides for increased buffers and landscaping from the roundabout west to Route 359 due to the removal of the portion of existing Greensprings Road that parallels Jamestown Road and also the removal of the parallel frontage road on the southside of Jamestown Road. The removal of the two roads provides approximately 50' of landscape area on each side of Jamestown Road that currently does not exist.
- It provides for the smooth flow of traffic without a need for stop signs or signalization.
- A potential connection to the JYF Acquisition property may be feasible from the roundabout.
- The Virginia Capital Trail is easily accommodated in the roundabout design without significant or costly re-routing of the trail.

West of the roundabout, a left turn lane onto Route 359 is required (Refer to the Site Access and Traffic Impacts section below for additional discussion). As an alternative to the left turn lane, a



second roundabout could be placed at the intersection of Jamestown Road and Route 359. This alternative should be further investigated at the time a traffic impact study is performed and final traffic alternatives considered.

Because to the high-visibility, historic sensitivity and the Community Character Corridor of the area, it was carefully evaluated so that proposed traffic improvements would not require removal of mature trees along the road that would negatively impact the screening of the park or the buffer area. The roundabout depicted on the plan is based on projected traffic volumes and could be constructed without adversely impacting the existing trees and buffers and would be an enhancement to the CCC by providing a landscaped gateway to the Jamestown Historic Area.

#### **2.2.19 S-Environmental Education Area**

The concept of the Environmental Education Area developed as a result of discussions during public meetings relating to the use of the entire property, or large portions of it, as an “Eco-Discovery Park.” Although, a large magnitude Eco-Discovery Park development was determined not to be feasible in light of maintaining JBC for public use and meeting the various grant requirements, there appeared to be significant public interest in the general notion of providing environmental education within the property. (See Section 2.2.33 below for further discussion related to the Eco-Discovery Park proposal).

The intent of the environmental education area is to provide walking trails that highlight environmental stewardship with exhibits for “rain gardens” and other low impact development techniques, signage and hands-on activities. These uses maintain and improve the natural surroundings and are compatible with grant requirements. Parties interested in the Eco-Discovery Park concept and the 4-H Club could play a role in assisting the county in developing an environmental education area and exhibits that build upon proposal elements that are compatible with other park programs.

The 4-H Club has expressed interest in the use and development of the environmental educational area and program and developing a joint partnership with JCC for its development and operation. It is considered a good area for 4-H camp participants to learn environmental education and outdoor skills development. This area is flexible as to the final program and layout and could be located anywhere between the cabin pods and along the wooded property adjacent to the 4-H Club Road.

#### **2.2.20 T-Trailhead with Restrooms**

The proposed restroom building and parking area provide a staging area for bikers and walkers using the Virginia Capital Trail. A bike/pedestrian crossing would be constructed from the trailhead across Greensprings Road and connecting directly to the existing trail. The parking lot and building would be set back 50’ or more from Greensprings Road in order to respect the CCC. In the final design layout of the parking lot and building, the CELCP grant area would be avoided and every effort should be made to provide the greatest buffer area possible for screening. The parking area would be constructed of open concrete pavers, or similar pervious material for the main parking area and have grassed areas suitable for overflow parking or future

expansion of the concrete pavers. The entrance into the parking lot serves only the trailhead facility; there are no other connections to the park. This limits its use to only trail users and minimizes traffic impacts to Greensprings Road.

The trailhead parking area and restroom also provides a shared use with the Mainland Farm Interpretive Area described immediately below.

#### **2.2.21 U-Mainland Farm Interpretive Area**

The northeast corner of the site overlooks portions of Mainland Farm, the “oldest continuously farmed” property in America, open fields in which the Battle of Green Spring was fought and the nearby historic site of the Church on the Main. (Refer to the Cultural Resources section above for further discussion as to the historic significance of the site.) A trail connects the parking lot and restroom to the interpretive overlook area with signage and an informational kiosk. This area would likely provide some kind of raised viewing area to get the visitors up high enough to see over road traffic to the sites beyond. This viewshed provides a unique opportunity for visitors to see several important historic vistas that have remained intact for hundreds of years.

#### **2.2.22 V-Large-Event Exit Only**

It was determined that for large events a second point of egress was needed. The exit-only at this location of Greensprings Road is gated during normal park operations and only opened after large events when manned traffic control will be on hand to direct traffic.

#### **2.2.23 W-Area for Group Tent Camping**

The group tent camping area is planned to accommodate groups of campers such as the Boy Scouts, corporate or church groups or other organizations that have reserved the site in advance. It is not intended for drive-in campers looking for individual campsites; such campers will be directed to CRP. The sites will be primitive with some water spigots provided around the area and a restroom building nearby shared with a cabin pod. The 4-H Club has expressed interest in the use of the group camping area.

#### **2.2.24 X-Bioretenation Basin**

Bioretention basins are shown on the plan to indicate the need for stormwater treatment for proposed buildings, parking and other developed areas. Stormwater would be treated as close to the source of run-off as possible with small bioretention basins contoured to compliment the landscaping. The actual location and size of bioretention basins depend on the final design of the proposed improvements.

#### **2.2.25 Proposed Landscape**

Generally the design intent of the proposed landscape will be to maintain and preserve as much of the character of the site as possible. Proposed roads and access ways will be planted with native species to provide a park like setting. The frontage along Jamestown Road will not only comply with the Community Character Corridor requirements set forth in the Comprehensive Plan, but will also be used to enhance the gateway to this corridor of attractive and historic



tourism uses, both planned and existing. Interpretive signage and displays will be appropriately placed to highlight natural, scenic, and historic cultural resources.

### **Vermillion House**

Landscape in and around the Vermillion House is to be maintained and managed to retain its existing character. Any paths or walkways would be done as aggregate on existing grade or with light grading for Americans with Disabilities Act compliance paying special attention to the root zones of the specimen plantings.

### **Forested Areas**

Landscape in the forested areas of the site will be maintained and thinned out by eliminating unhealthy species. The proposed uses in the forested areas are intended to have limited impact and comply with all CELCP and VLCF grant requirements.

### **Landscape along the James River**

The landscape along the James River will be removed where appropriate to provide access to the beach. Lawn areas leading up to the river will be allowed to naturalize within the areas designated within the CELCP and VLCF grants.

#### **2.2.26 Park Trail**

A trail system would wrap around the park and provide access to the primary park amenities including the Virginia Capital Trail at the proposed trailhead, natural area along 4-H Club road, cabin areas, beach, Vermillion House and to Jamestown Road. The trail is meant to be bicycle and pedestrian friendly with good connections to the Virginia Capital Trail. It is paved or surfaced with a hardener or gravel suitable as an ADA route and well maintained. Small diameter plastic piping would be used to convey water across the trail where necessary to minimize water collecting along the edge of the trail.

#### **2.2.27 Vehicle Circulation**

Vehicle circulation throughout the park has been significantly changed in response to access limitations imposed by the acquisition of additional right-of-way by VDOT along Jamestown Road. This acquisition eliminates two existing access points, 1) the existing access to the beach parking area near the ferry pier and 2) the existing Vermillion House driveway. As a result, the existing main entrance remains the primarily access point for future improvements.

### **Main Entrance Proposed at Jamestown Road**

The existing main entrance to the park remains in its current location with improvements made only as required to bring it up to current standards. A secondary exit-only is proposed onto Greensprings Road near the location of the temporary connection that was made previously at the end of the existing park road. This exit-only will be controlled with a gate and will not be used except for large event egress when manned traffic control is provided on Greensprings Road.



To the east of the entrance there is a left-turn lane onto Route 359 which is required based on estimated future traffic volumes. Refer to Appendix G for traffic impact information.

### Internal Road

The internal park road enters the park along the existing alignment for approximately 400 feet and then branches off to the northwest between the grass event areas and to the west to the Vermillion House and to the south beach parking area. The road would be 22 feet wide and paved with brown river-rock aggregate asphalt for a softer, more park-like appearance.

The internal road from the entrance intersects the main road that connects to the north beach parking area and to the access road to the group camping and cabin areas to the west. There will be an entrance driveway to the JYF parcel in the area of the maintenance building. The minor roads in the cabin areas are gravel and narrower through the grant and natural areas.

At the intersection, the main road to the east provides access to off-road parking areas for the cabins and the large event areas. The road terminates at the gated exit-only onto Greensprings Road. Just to the north of this location is the entrance to the Virginia Capital Trail Trailhead. There is no internal vehicle circulation connection from the trailhead parking lot to the other park amenities.

### 2.2.28 Parking

Adequate parking has been provided in the plan for the proposed park program elements. Approximately 700 spaces are proposed in the master plan with the possibility of expanding the total number by utilizing overflow parking in grassed areas along roads. Below is a table comparing in general terms the proposed parking to the existing parking currently at the park.

**Table 2-1 Parking Summary**

Location	Proposed Parking Spaces	Existing Parking Spaces
Vermillion House	108	-
Overflow Parking	300	500
Beach Parking	32	20
Secondary Beach Access	35	20
Trailhead	48	-
Performance Building / Office	10	21
Maintenance Center	20	4
Alongside Road	146	-
<b>TOTAL</b>	<b>699</b>	<b>565</b>



### **2.2.29 Site Access and Traffic Impacts**

The primary site access for ingress and egress to the site will remain in its existing location on Jamestown Road. The entrance will be improved as required to meet current VDOT entrance standards.

A preliminary traffic impact analysis was performed to determine potentially where turn lanes may be required. The analysis used 2007 VDOT average daily traffic (ADT) data provided by JCC and the number of vehicle trips generated by the proposed uses from the Institute of Transportation Engineers (ITE) publication, *Trip Generation*, 7<sup>th</sup> Edition. The left and right turn lane warrants analysis followed the VDOT Road Design Manual, Appendix C method.

The result of the analysis is that a left turn lane onto Route 359 from Jamestown Road is required. The analysis also confirmed that the existing right turn lane onto Route 359 is required and must remain. No left or right turn lanes into the park entrance are required.

The analysis also verified that no turn lanes are required for the proposed entrance to the Trailhead off of Greensprings Road.

In order to determine whether additional lanes on Jamestown Road may be required due to the proposed improvements, VDOT was provided with the estimated additional traffic volume on Jamestown Road. VDOT added the proposed traffic volume to existing traffic data for Jamestown Road.

Based on VDOT's cursory look at the potential traffic impact, it appears that Jamestown Road in the vicinity of the commercial section near Route 199 would remain with excess capacity; therefore additional lanes would not be required. VDOT noted, however, that the level of service for that portion of Jamestown Road would be reduced and emphasized that a full traffic impact study would be required to be performed prior to rezoning or site plan approvals.

Refer to Appendix G for detailed information in support of the preliminary traffic impact analysis.

*Note: Existing traffic patterns and available traffic data provided by JCC were considered in the overall development of the park concept plans, however, a Traffic Impact Study (TIS) was not included in the project scope of work nor performed as part of the evaluation. It is understood that a Traffic Impact Study would be required for the proposed park program elements. The TIS is required to determine the final traffic impacts to adjacent roads and site access requirements.*

Large park events were not considered in the above evaluation of the traffic impacts. In the case of large special events, manned traffic control will be planned by JCC in advance and operations directed, as needed, onsite at the time of the event.

### **2.2.30 Stormwater Management**

The park would continue to drain primarily by sheet flow and be collected in shallow grass swales along park roads and the perimeter of parking lots. Within parking lots, stormwater would be collected in parking lot islands near its source and be treated with low impact development (LID) measures. The parking lot islands and shallow grass swale systems would convey stormwater runoff to bioretention/infiltration treatment facilities prior to discharging into existing swales and channels.

Bioretention basins are shown on the master plan; however the final location and size of the basins would be determined during final site design and approval. In the final design of stormwater systems, the channels would be required to meet the minimum channel requirements (MS-19) which may involve some variations of stream restoration techniques. If implemented, these stream restoration techniques may possibly be applied to environmental mitigation for impacts related to site improvements.

The total proposed impervious area is conservatively estimated to be approximately 14% or less for the site. Based on James City County code section 23-10-4, any site exceeding 10% impervious cover is required to have a structural BMP. Currently in JCC, compliance with nonpoint source pollution control requirements for CBPA is based on the BMP Point System per "James City County Guidelines for Design and Construction of Stormwater Management BMP."

Since it is likely that this site will be constructed in various phases, a stormwater management master plan should be completed and approved before detailed site plans are developed to ensure overall compliance with the BMP 10-Point System. Stormwater treatment would be provided in the phased development through bioretention, dry swales and other LID measures and each system will need to have an adequate drainage bypass.

### **2.2.31 Proposed Utilities**

#### **Water Service**

Water service will be provided to the site in the vicinity of the entrance via a direct connection to the existing 8-inch water main located along Jamestown Road. Water meters and fire protection systems including double detector checks/meters and fire department connections will be placed as needed near the buildings served by the service. Where possible, the existing waterline corridors and trenches would be utilized in order to minimize additional land and cultural resource disturbance on the site. An evaluation of the existing water system indicates that reuse of the system is not feasible due to its age, sizing and general condition. (See Figure 2-3)

#### **Sanitary Service**

The proposed sanitary concept plan calls for a minimum of one connection to the existing James City County sanitary system force main located in the vicinity of the park entrance at Jamestown Road. (See Figure 2-3)



There are approximately twelve proposed sanitary connections to buildings and to the cabin areas proposed on the site. Much of the site can be serviced via gravity sewer laterals to a central pump station, however some of the more remote restroom buildings such as the beach concession/restroom buildings, may need to be serviced by small manufactured grinder pump systems (i.e. Environment-One System) and pumped to the central pump station. The grinder pump stations also allow the force main to be installed using trenchless technology (i.e. directional drilling/bored) that would greatly minimize or eliminate land disturbance in sensitive buffer and cultural resource areas.

The proposed cabins are provided with sewer service. Each pod of cabins would be connected with a common lateral to the central pump station or to a grinder pump depending on topography and other environmental or cultural resource constraints.

### **Dominion Virginia Power**

The existing electrical service onsite was evaluated to determine potential reuse of the system and to determine possible routing of new electrical service lines. The existing system consists of overhead lines and pole mounted transformers. For a “signature park” overhead electric is not aesthetically appropriate and has a lower reliability in wooded areas. The proposed concept plan calls for all the electrical service to be installed underground with at-grade transformers. A conceptual electrical schematic of the proposed electrical system is provided in Figure 2-3.

### **Natural Gas**

Final design plans for buildings and infrastructure would likely provide Virginia Natural Gas service to the park and removal of existing propane tanks. New gas service would be provided to building locations as needed based upon the architectural design requirements of the buildings.

### **Telephone**

Future improvements will require that telephone and high-speed communication capabilities are provided to the site in support of proposed program elements and especially large event venues in which state-of-the-art high-capacity communications and data links are essential.

### **Fiber Optic**

As noted above, proposed improvements will require fiber optic and high-speed communication capabilities in support of proposed program elements, especially large event venues.

## **2.2.32 Cultural Resources**

Areas identified in the report by ACS as having significant cultural resources have been avoided in the planning of program elements so as to minimize detrimental impacts potential resources. Areas with potential cultural resources, as provided by ACS, are depicted in Figure 1-2.

### **2.2.33 Public Proposals for Park Use**

Two special interest groups expressed their desire to see the park, or portions of it, dedicated to a specific program. The direction given to the consulting team was to maintain broad public access to the park and create an atmosphere and character consistent with a “signature park.” that enhances the public’s use of the site and develops the public’s appreciation of the value of the resource. Utilization of the majority of park lands by private organizations is not in line with the master planning goals for this project. The planning team does support many of the functions proposed, but on a smaller scale. The program proposals for an “Eco-Discovery Park” and a botanical garden are briefly summarized below along with the rationale as to why the programs were not further developed in the master plan.

#### **Eco-Discovery Park**

The goal of the Eco-discovery Park is “to create a regional environmental educational center in a natural setting dedicated to educating residents, students, and visitors about green living practices and inspiring changes in human behavior.”

The facility would be run by a non-profit organization which would in turn supervise smaller “learning modules” run by various groups with relevant expertise. The components of the center would include among other things; classrooms, offices, store/café with local organic foods, commercial and residential green demonstration buildings, upgrading the Vermillion House to be energy efficient and environmental exhibits such as renewable energy, geothermal, alternative fuel vehicles, recycling, composting and organic farming.

The proposed program would occupy 50% or more of the property and would encroach into grant areas with some development that would require further analysis to determine its compatibility with the grant objectives and requirements. It is not the role of the consulting team or the JCC project staff to review and approve for further development public proposals for the use of the property. Proposals of this nature would be subject to a public procurement process based on a County issued Request for Proposals that described the County’s needs and listed the evaluation criteria to be used in making an award decision. The consulting team considered elements from the Eco-Discovery Park proposal that are consistent with the vision for a “signature park” and provided an environmental education area (designated as “S” on Figure 2-

2) in which appropriate Eco-Discovery center elements and exhibits could be incorporated into park programs.

#### **Williamsburg Botanical Gardens**

The Williamsburg Botanical Gardens Board of Directors developed a conceptual plan for a botanical garden to be located on the JBC property. Their concept plan calls for a phased approach to developing the botanical gardens. Phase I consists of the creation of the initial gardens and an educational facility requiring approximately 15 acres of the property. The Phase I plan also includes occupying the historic Vermillion House with offices, a gift shop and meeting rooms for lectures. Future phases of the plan would occupy approximately 35 additional acres for expanded gardens, conservatory, lecture hall and additional parking.

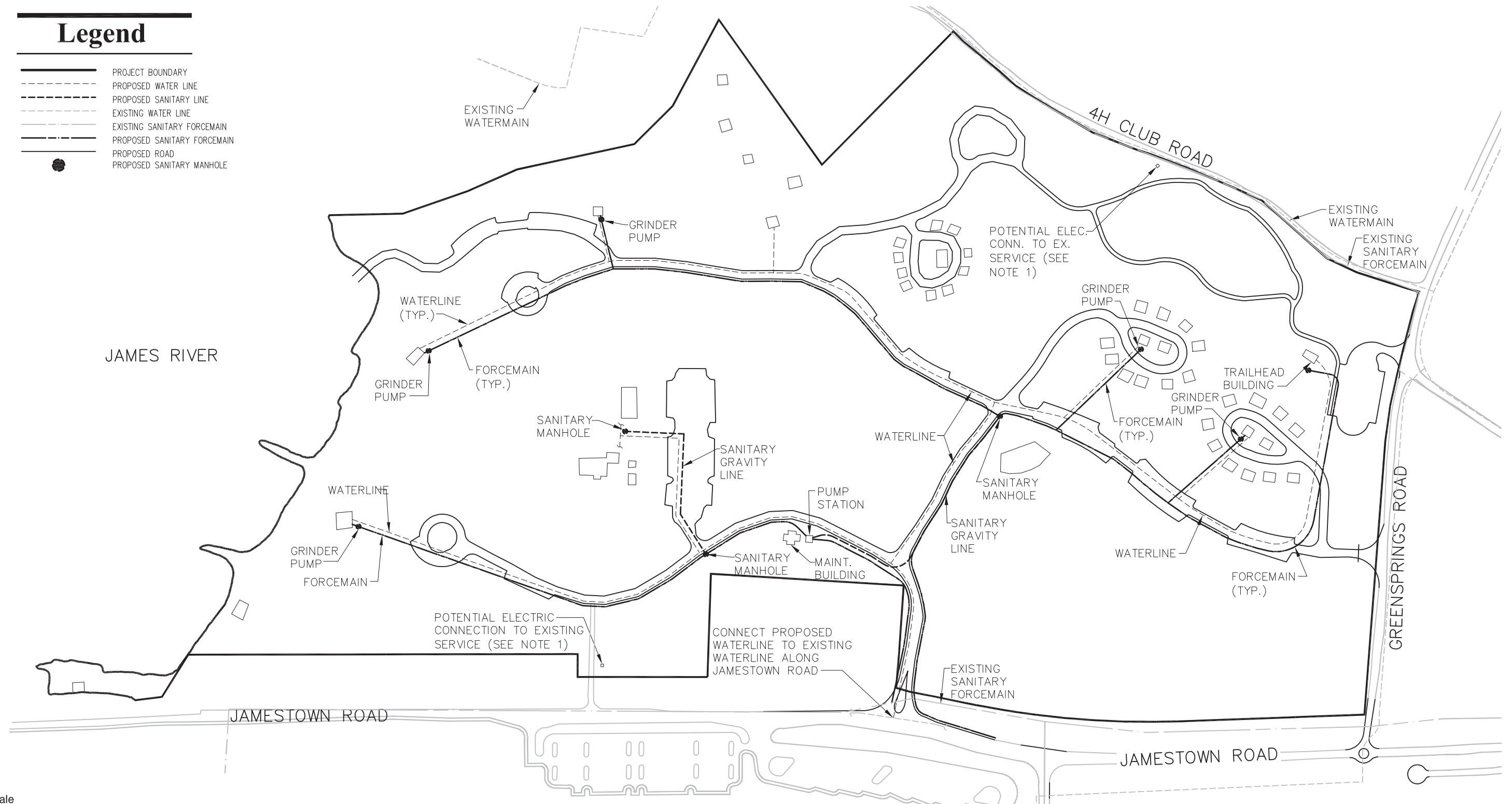


As noted above, it is not the role of the consulting team or the JCC project staff to review and approve for further development public proposals for the use of the property. The consulting team considers the inclusion of a botanical garden element consistent with the vision for a “signature park” especially as it is an opportunity to recreate the formal garden of the Vermillion House and is designated as “C” on Figure 2-2.



# Legend

- PROJECT BOUNDARY
- PROPOSED WATER LINE
- PROPOSED SANITARY LINE
- EXISTING WATER LINE
- EXISTING SANITARY FORCEMAIN
- PROPOSED SANITARY FORCEMAIN
- PROPOSED ROAD
- PROPOSED SANITARY MANHOLE



Not to Scale



NOTE: DOMINION VIRGINIA POWER WILL DETERMINE THE FINAL ELECTRICAL CONNECTION LOCATION.

## SHAPING OUR SHORES

### Master Plan

for Jamestown Beach Campground, Jamestown Yacht Basin & Chickahominy Riverfront Park

Figure 2-3  
Proposed Utilities  
Jamestown Beach Campground